CLAIMS

1.- A monotonic digital-to-analog converter for converting a digital input signal into an analog output signal, the converter comprising:

- an input node for receiving the digital input signal having at least M+L bits,
- an output node for delivering the analog output signal corresponding to the received digital input signal,
- a coarse conversion block comprising current sources and first switching means for converting M more significant bits of the digital input signal into a coarse block output current,
- a fine conversion block comprising a current divider and second switching means for converting L less significant bits of the digital input signal into a corresponding current value, the fine conversion block having means for receiving current from a first of N unselected current sources of the coarse conversion block,

the monotonic digital-to-analog converter furthermore comprising:

- a first cascode means (OA1 + MC1) for active cascoding the coarse block output current, and
- a second cascode means (OA2) for active cascoding the current from the first unselected current source.

2.- A monotonic digital-to-analog converter according to claim 1, a first switching means being associated with a current branch, wherein the first switching means consist of two switching devices with three states on the associated current branch, or of three-way switches.

3.- A monotonic digital-to-analog converter according to claim 1, wherein the second to Nth unselected current sources are switched off.

4.- A monotonic digital-to-analog converter according to claim 1, wherein the coarse conversion block comprises linearly weighted current sources.

5.- A monotonic digital-to-analog converter according to claim 1, wherein the fine conversion block comprises a linearly weighted current divider.

6.- A monotonic digital-to-analog converter according to claim 1, wherein the converter is furthermore provided with means for applying pulse width

modulation (PWM) to a first unselected fine bit.

7.- A monotonic digital-to-analog converter according to claim 1, furthermore comprising an output follower loop (OA3) for buffering the voltage on the output node.

8.- A method for converting a digital value comprising at least M+L bits into an analog value, the method comprising:

- selecting a first number of current sources in the coarse conversion block, said first number depending on the value of M more significant bits of the digital value,
- switching current of the selected first number of current sources to an output node,
- switching current from a first unselected current source in the coarse conversion block to a fine conversion block,
- dividing the current from the switched unselected current source over a current divider in the fine conversion block,
- selecting a second number of current outputs in the fine conversion block, said second number depending on the value of L less significant bits of the digital value,
- switching current of said selected current sources in the fine conversion block to the output node,
- active cascoding the coarse block output current, and
- active cascoding the current of a first of N unselected current sources in the coarse conversion block.

9.- A method according to claim 8, further comprising applying pulse width modulation on current from an unselected current output in the fine conversion block, and switching this pulse width modulated current to the output node.

10.- A method according to claim 8, furthermore comprising switching off the second to Nth unselected current sources in the coarse conversion block.

11.- A method according to claim 8, wherein dividing the current from the switched unselected current source in the coarse conversion over a current divider in the fine conversion block comprises linearly weighted dividing said current.

12.- A method according to claim 8, furthermore comprising buffering a voltage on the output node.